UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

| SERIAL NUMBER | FILING DATE | FIRST NAMED APPLICANT | ATTORNEY DOCKET NO. |
|---|---|---|---|
| 09/011,910 | 02/17/98 | ABRIGNANI S | 0336.001 |

HM22/0829

ALISA A HARBIN
CHIRON CORPORATION
INTELLECTUAL PROPERTY R440
PO BOX 8097
EMERYVILLE CA 94662-8097

| EXAMINER | |
|---|---|
| BRUMBACK, B | |
| ART UNIT | PAPER NUMBER |
| 1642 | 12 |

DATE MAILED: 08/29/00

*Below is a communication from the EXAMINER in charge of this application*

*COMMISSIONER OF PATENTS AND TRADEMARKS*

## ADVISORY ACTION

☑ THE PERIOD FOR RESPONSE:

a) ☑ is extended to run 5 months or continues to run _____ from the date of the final rejection

b) ☐ expires three months from the date of the final rejection or as of the mailing date of this Advisory Action, whichever is later. In no event however, will the statutory period for the response expire later than six months from the date of the final rejection.

Any extension of time must be obtained by filing a petition under 37 CFR 1.136(a), the proposed response and the appropriate fee. The date on which the response, the petition , and the fee have been filed is the date of the response and also the date for the purposes of determining the period of extension and the corresponding amount of the fee. Any extension fee pursuant to 37 CFR 1.17 will be calculated from the date of the originally set shortened statutory period for response or as set forth in b) above.

☐ Appellant's Brief is due in accordance with 37 CFR 1.192(a).

☐ Applicant's response to the final rejection, filed _____ has been considered with the following effect, but it is not deemed to place the application in condition for allowance:

1. ☑ The proposed amendments to the claim and /or specification will not be entered and the final rejection stands because:

   a. ☐ There is no convincing showing under 37 CFR 1.116(b) why the proposed amendment is necessary and was not earlier presented.

   b. ☑ They raise new issues that would require further consideration and/or search. (See Note).

   c. ☐ They raise the issue of new matter. (See Note).

   d. ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal.

   e. ☐ They present additional claims without cancelling a corresponding number of finally rejected claims.

   NOTE: See attached.

2. ☐ Newly proposed or amended claims _____ would be allowed if submitted in a separately filed amendment cancelling the non-allowable claims.

3. ☑ Upon the filing an appeal, the proposed amendment ☐ will be entered ☑ will not be entered and the status of the claims will be as follows:

   Claims allowed: _____
   Claims objected to: _____
   Claims rejected: 2-4, 6-14, and 17

   However;
   ☑ Applicant's response ~~has~~ would overcome the following rejection(s): See attached.

4. ☑ The affidavit, exhibit or request for reconsideration has been considered but does not overcome the rejection because See attached.

5. ☐ The affidavit or exhibit will not be considered because applicant has not shown good and sufficent reasons why it was not earlier presented.

☐ The proposed drawing correction ☐ has ☐ has not been approved by the examiner.

☐ Other

## DETAILED ACTION

***Attachment to Advisory Action***

**NOTE:** Page 4 is missing from applicants response filed 08/07/00.

**Item # 1:**

1. Applicant's proposed amendment to claim 14 would raise a new issue under 35 U.S.C. 112, second paragraph. Applicant's proposed claim 14 does not contain all the limitations of claim 14 as previously amended (see Paper # 9 filed 01/10/00, specifically page 5). The phrase "or a functionally equivalent variant or fragment thereof" has been omitted but not deleted from the newly proposed claim. Clarification is required.

**Item # 3:**

3. If entered, applicant's proposed amendments would overcome the objection to the disclosure as lacking an abstract and the rejection of claims 2-10 for recitation of "functionally equivalent variant or fragment thereof", "functionally unglycosolated", "hyperexpression" (claim 6), at least one step of hydrophobic interaction chromatography, at least one step of acetone precipitation, and the binding step.

Also, if entered, applicant's arguments would overcome the rejection of claim 17 under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Mehta et al.

**Item # 4:**

3. Applicant's argument that the finality of the previous Office action was premature in that the new gourds of rejection (claims 2-10 and 13) were not necessitated by any amendment in the previous Response has been fully considered but is not persuasive. As was pointed out in the last Office action (see page 6, paragraph 6), the new grounds or rejection were in fact necessitated by applicant's amendment adding the limitation "capable of specifically binding a protein of hepatitis C virus".

4. The rejection of claims 2-4, 6-14, and 17 under 35 U.S.C. 112, first paragraph, is maintained. Applicant's amendments and arguments, if entered, would overcome the portion of the rejection related to the indefinite language. However, the rejection of claims 11 and 12 as nonenabling for *in vivo* administration is maintained. Applicant's arguments have been fully considered but they are not persuasive.

Applicant argues that claim 12 is not directed to therapeutic compositions, but rather to a "pharmaceutical composition", which can also be used for *in vivo* diagnostics. Applicant's argument is not persuasive because one of skill in the art would interpret a pharmaceutical preparation as a drug intended for therapeutic treatment, not as a diagnostic preparation. Even if a pharmaceutical composition were to be used for *in vivo* diagnostics, therapeutic administration of the composition would be envisioned as well.

Applicant's arguments regarding therapeutic administration *in vivo* are essentially the same as those presented in the previous response and are all directed to HCV binding by CD81 *in vitro,* not to the claimed therapeutic administration *in vivo*. Applicant adds the argument that Rice questions whether CD81 is critical for infection and that studies conducted by applicant demonstrating a correlation between species susceptibility and the protein have shown that it is indeed critical. Firstly, applicant's data on page 24 of the disclosure shows that CD81 is found on human cells and not on cells from other species. It does not show that CD81 is critical to HCV infection. In fact, Rice also teaches that only humans (and chimpanzees) are susceptible to HCV; other species are not. Rice also teaches, however, that a correlation between susceptible cells and the presence of CD81 does not demonstrate that CD81 is the one and only cellular receptor for HCV or that it is even the primary receptor for HCV (see page 990, the paragraph bridging columns 1 and 2 and column 1, first full paragraph, first two sentences). Applicant has provided no evidence to the contrary. Furthermore, Rice goes on to teach that other cell surface molecules may allow attachment and entry of infectious HCV (page 991, first sentence). Thus, applicant's arguments, in the absence of supporting evidence, are not persuasive.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brenda Brumback whose telephone number is (703) 306-3220. If the examiner can not be reached, inquiries can be directed to Supervisory Patent Examiner Anthony Caputa whose telephone number is (703) 308-3995. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0196. Papers related to this application may be submitted to Group 1600 by facsimile transmission. Papers should be faxed to Examiner Brenda Brumback, Art Unit 1642 and

should be marked "OFFICIAL" for entry into prosecution history or "DRAFT" for consideration by the examiner without entry. The Art Unit 1642 FAX telephone number is (703)-305-3014. FAX machines will be available to receive transmissions 24 hours a day. In compliance with 1096 OG 30, the filing date accorded to each OFFICIAL fax transmission will be determined by the FAX machine's stamped date found on the last page of the transmission, unless that date is a Saturday, Sunday or Federal Holiday with the District of Columbia, in which case the OFFICIAL date of receipt will be the next business day.

Brenda Brumback
August 26, 2000

ANTHONY C. CAPUTA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600